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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Antonius Johannes Maria Nellissen

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

HINDENLANG, ALISON L

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

01/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,932	Applicant(s) NELLISSSEN ET AL.	
	Examiner ALISON HINDENLANG	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/09/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-5, drawn to a process of making a mold.

Group II, claim(s) 6-8, drawn to a process of making contact lenses.

Group III, claim(s) 10-16, drawn to an apparatus for making a mold.

2. The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The use of a photoresist layer on a mold surface to manufacture a customized optical surface is known in the prior art (see Harchanko WO 2004/039554). Thus there is, *a posteriori*, no special technical feature.

3. During a telephone conversation with Frank Keegan on 1/13/2009 a provisional election was made without traverse to prosecute the invention of Group III, claims 10-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

4. Claim 14 is objected to because of the following informalities: Claim 14 recites "from the projection system" which lacks antecedent basis as "a projection system" does not appear earlier in the current claim or in claim 16 from which it depends. Examiner suggests amending the claim so that "the projection system" depends from the "an *optical* projection system" (emphasis added) of claim 11. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 16 and 10-12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harchanko (WO 2004/039554) further in view of Jones (US 4909818).

With respect to claim 16, Harchanko teaches:

A device for exposing, to a predetermined pattern of exposure radiation during a predetermined time, a photoresist layer on a mold surface of a mold having a base shape, ("lithographic method for forming mold inserts and molds", title) the device comprising:

a radiation source emitting UV radiation ("illumination source 140", column 5, lines 26-27, figure 1),

...

a spatial light modulator configured to impart to the exposure beam a radiation distribution according to the predetermined pattern ("the gray scale mask 130", column 5, line 27, figure 1 – "an electronic gray-scale mask may be used, for example an array of liquid crystal display ("LCD") cells or comparable spatial light modulators", column 9, lines 16-18) and render the photoresist layer developable to selectively remove photoresist material according to the radiation pattern and shape the exposed surface of the layer to a required end shape of the mold, and ("In the case in which a negative photoresist-like method is used, the material is exposed by passing illumination 150, which may, for example, be ultra-violet light, from an illumination source 140 through the gray-scale mask 130 and the through the blank 110. The illumination passes through the blank 100 and into material 120 developing the material 190 depending upon the penetration depth 170 determined by gray-scale mask 130", column 5, lines 24-30)

a mold holder arranged in the path of the radiation from the spatial light modulator for holding the mold to be exposed ("the blank 110 and radiation-curable material 120 are loaded onto a fixture that sets the position of the substrate relative to a gray-scale mask 130", column 5, lines 21-22),

whereby the base shape of the mold is modified to obtain the required shape of the mold surface ("curing produces a developed, radiation-curable material 190 with a surface 160 having the desired configuration", column 6, lines 5-6).

Harchanko does not teach:

optical means for concentrating the emitted radiation in an exposure beam in a photolithographic process,

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In the same field of endeavor, light projection systems, Jones teaches a “beam profiler 14” (column 2, line 40, figure 1) for the purpose of providing “a profiled beam 17 of more uniform symmetrical intensity than the laser output beam 13” (column 2, lines 43-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus taught by Harchanko by adding a beam profiler as taught by Jones for the purpose of providing a more symmetrical exposure beam.

8. With respect to claim 10, Harchanko further teaches:

wherein the spatial light modulator is a liquid crystal display (LCD) (“and electronic gray scale mask may be used, for example an array of liquid crystal display (“LCD”) cells, or comparable spatial light modulators”, column 9, lines 17-18), digital mirror device or deformable mirror device (“alternatively, modulation may be carried out using a adaptive mirror to generate a wavefront the intensity of which is modulated across its surface...using a discrete array of mirrors to deflect the light”, column 10, lines 9-13).

9. With respect to claim 11, Harchanko teaches:

wherein an optical projection system is arranged between the spatial light modulator and the mold holder. (“the lens residing between the mask and the substrate”, column 10, lines 23-24)

10. With respect to claim 12, Harchanko, in the primary embodiment illustrated by figure 1, does not teach “an optical projection system” thus it would have been obvious to one of ordinary skill in the art at the time of the invention that in the system taught by Harchanko “the mold holder and the spatial light modulator are arranged close to each other” as claimed.

11. With respect to claim 14, Harchanko teaches:

wherein the mold holder is arranged at such distance from the projection system that the photoresist layer on the mold to be exposed is outside the focus plane of the projection system. (“the lens residing between the mask and the substrate may be defocused”, column 10, lines 23-24)

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12. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Harchanko (WO 2004/039554) and Jones (US 4909818) as applied to claim 16 above, and further in view of MacKinnon (US 2002/0135763).

13. With respect to claim 13, the combination of Harchanko and Jones does not teach:

wherein a diffuser element is arranged in the path of the exposure beam between the spatial light modulator and the mold holder.

In the same field of endeavor, light projection systems, MacKinnon teaches “the embodiment shown comprises a spectral recombiner comprising a direction diffuser” (paragraph 0055, figure 4) the light from which “then passes a projection system 72” (paragraph 0055, figure 4) for the purpose of projecting the beam in a particular direction (paragraph 0063). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the light projection system taught by the combination of Harchanko and Jones for the purpose of projecting the light beam in a specific direction.

14. With respect to claim 15, the combination of Harchanko and Jones does not teach:

wherein the spatial light modulator is coupled to a computer, which supplies data about the exposure pattern to be formed in the photoresist layer.

In the same field of endeavor, MacKinnon teaches “SLM 16 is operably connected to at least one controller 44 that contains computer-implemented programming” (paragraph 0049, figure 4) for the purpose of controlling “the on/off pattern of the pixels” (paragraph 0049). It would have been obvious to one of ordinary

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skill in the art at the time of the invention to modify the system taught by Harchanko and Jones such that the SLM was coupled to a computer for the purpose of controlling the pattern of the pixels.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Akimoto (US 6008929) discloses an image displaying apparatus that includes a light source, an optical system, and SLM, and a projection system where the SLM is coupled to a control circuit. Berman (US 3659528) discloses the use of a photoresist for contouring optical components where the irradiation is computer controlled and a mask may also be used.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALISON HINDENLANG whose telephone number is (571) 270-7001. The examiner can normally be reached on Monday to Thursday 7:30 - 5 pm; Every other Friday 7:30 - 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALH

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791